

**CLAIMS**

What is claimed is:

1. A plurality of capacitive memory elements disposed on a substrate so that an axis that runs longitudinally through one of the plurality of capacitive memory elements is not  
5 generally parallel with an edge of the substrate.

2. The plurality of capacitive memory elements set forth in claim 1 wherein the axis is not generally perpendicular with an orthogonal edge of the substrate.

10 3. The plurality of capacitive memory elements set forth in claim 1 wherein the substrate comprises a processor.

4. The plurality of capacitive memory elements set forth in claim 1 wherein the substrate comprises a memory device.

15 5. The plurality of capacitive memory elements set forth in claim 1 wherein the substrate comprises an integrated circuit device.

20 6. The plurality of capacitive memory elements set forth in claim 1 wherein each of the plurality of capacitive memory elements is generally oblong in shape.

7. The plurality of capacitive memory elements set forth in claim 6, wherein each of the plurality of capacitive memory elements is generally ellipsoidal.

8. The plurality of capacitive memory elements set forth in claim 1 wherein each of the plurality of capacitive memory elements is slanted with respect to the edge of the substrate.

5 9. A plurality of capacitive memory elements arranged in a first row and a second row so that an axis through any of the plurality of capacitive memory elements located in the first row does not form an axis of any capacitive memory element in the second row.

10 10. The plurality of capacitive memory elements set forth in claim 9 wherein the plurality of capacitive memory elements is disposed on a substrate.

11. The plurality of capacitive memory elements set forth in claim 9 wherein the axis is not generally parallel with an edge of the substrate.

15 12. The plurality of capacitive memory elements set forth in claim 11 wherein the axis is not generally perpendicular with an orthogonal of the substrate.

13. The plurality of capacitive memory elements set forth in claim 9 wherein the substrate comprises a processor.

20 14. The plurality of capacitive memory elements set forth in claim 9 wherein the substrate comprises a memory device.

15. The plurality of capacitive memory elements set forth in claim 9 wherein the substrate comprises an integrated circuit device.

16. The plurality of capacitive memory elements set forth in claim 9 wherein the axis  
5 is slanted with respect to the edge of the substrate.

17. The plurality of capacitive memory elements set forth in claim 9 wherein each of the plurality of capacitive memory elements is generally oblong in shape.

10 18. The plurality of capacitive memory elements set forth in claim 17, wherein each of the plurality of capacitive memory elements is generally ellipsoidal.

19. The plurality of capacitive memory elements set forth in claim 9 wherein the axis is a longitudinal axis through one of the capacitive memory elements.

15 20. An integrated circuit device, comprising:

a substrate;

a memory array that includes a plurality of memory cells disposed on the substrate, the  
memory array comprising a plurality of capacitive memory elements, each of the  
20 capacitive memory elements being associated with one of the plurality of memory  
cells, the plurality of capacitive memory elements being disposed on the substrate  
so that an axis that runs longitudinally through one of the plurality of capacitive  
memory elements is not generally parallel with an edge of the substrate.

21. The integrated circuit device set forth in claim 20 wherein the axis is not generally perpendicular with an orthogonal edge of the substrate.

5           22. The integrated circuit device set forth in claim 20 wherein the substrate comprises a processor.

23. The integrated circuit device set forth in claim 20 wherein the substrate comprises a memory device.

10           24. The integrated circuit device set forth in claim 20 wherein each of the plurality of capacitive memory elements is generally oblong in shape.

15           25. The plurality of capacitive memory elements set forth in claim 24, wherein each of the plurality of capacitive memory elements is generally ellipsoidal.

26. The integrated circuit device set forth in claim 20 wherein each of the plurality of capacitive memory elements is slanted with respect to the edge of the substrate.

20           24. An integrated circuit device, comprising:  
a substrate;  
a memory array that includes a plurality of memory cells disposed on the substrate, the  
memory array comprising a plurality of capacitive memory elements, each of the

capacitive memory cells being associated with one of the plurality of memory cells, the plurality of capacitive memory elements being arranged in a first row and a second row so that an axis through one of the plurality of capacitive memory elements located in the first row does not form an axis of any capacitive memory element in the second row.

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25. The integrated circuit device set forth in claim 24 wherein the plurality of capacitive memory elements is disposed on a substrate.

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26. The integrated circuit device set forth in claim 24 wherein the axis is not generally parallel with an edge of the substrate.

27. The integrated circuit device set forth in claim 26 wherein the axis is not generally perpendicular with an orthogonal edge of the substrate.

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28. The integrated circuit device set forth in claim 24 wherein the substrate comprises a processor.

29. The integrated circuit device set forth in claim 24 wherein the substrate comprises a memory device.

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30. The integrated circuit device set forth in claim 24 wherein each of the plurality of capacitive memory elements is slanted with respect to the edge of the substrate.

31. The integrated circuit device set forth in claim 24 wherein each of the plurality of capacitive memory elements is generally oblong in shape.

5 32. The integrated circuit device set forth in claim 31, wherein each of the plurality of capacitive memory elements is generally ellipsoidal.

33. The integrated circuit device set forth in claim 24 wherein the axis is a longitudinal axis.

10 34. An electronic device, comprising:

a processor adapted to executed instructions;

a storage device adapted to store instructions to be executed by the processor;

a user input device adapted to receive data for use by the processor from a user;

15 a display device adapted to produce an image for viewing by a user based on instructions executed by the processor; and

a memory device that receives information stored on the storage device, the memory device comprising:

a substrate; and

20 a plurality of capacitive memory elements disposed on the substrate so that an axis that runs longitudinally through one of the plurality of capacitive memory elements is not generally parallel with an edge of the substrate.

35. The electronic device set forth in claim 34 wherein the axis is not generally perpendicular with an orthogonal edge of the substrate.

5 36. The electronic device set forth in claim 34 wherein each of the plurality of capacitive memory elements is generally oblong in shape.

37. The electronic device set forth in claim 36, wherein each of the plurality of capacitive memory elements is generally ellipsoidal.

10 38. The electronic device set forth in claim 34 wherein each of the plurality of capacitive memory elements is slanted with respect to the edge of the substrate.

39. An electronic device, comprising:  
a processor adapted to executed instructions;  
15 a storage device adapted to store instructions to be executed by the processor;  
a user input device adapted to receive data for use by the processor from a user;  
a display device adapted to produce an image for viewing by a user based on instructions  
executed by the processor; and  
a memory device that receives information stored on the storage device, the memory device  
20 comprising:  
a plurality of capacitive memory elements arranged in a first row and a second  
row so that an axis through one of the plurality of capacitive memory

elements located in the first row does not form an axis of any capacitive memory element in the second row.

5           40.     The electronic device set forth in claim 39 wherein the plurality of capacitive memory elements is disposed on a substrate.

          41.     The electronic device set forth in claim 40 wherein the axis is not generally parallel with an edge of the substrate.

10          42.     The electronic device set forth in claim 41 wherein the axis is not generally perpendicular with an orthogonal edge of the substrate.

          43.     The electronic device set forth in claim 39 wherein each of the plurality of capacitive memory elements is slanted with respect to the edge of the substrate.

15          44.     The electronic device set forth in claim 39 wherein each of the plurality of capacitive memory elements is generally oblong in shape.

20          45.     The electronic device set forth in claim 44, wherein each of the plurality of capacitive memory elements is generally ellipsoidal.

          46.     The electronic device set forth in claim 39 wherein the axis is a longitudinal axis.



47. A process for making an integrated circuit device, the process comprising the acts  
of:

providing a substrate; and

5 disposing a plurality of capacitive memory elements on the substrate so that an axis that  
extends longitudinally through one of the plurality of capacitive memory elements  
is not generally parallel with an edge of the substrate.

48. A process for making an integrated circuit device, the process comprising the acts  
10 of:

providing a substrate; and

disposing a plurality of capacitive memory elements arranged in a first row and a second  
row so that an axis through one of the plurality of capacitive memory elements  
located in the first row does not form an axis of any capacitive memory element  
15 in the second row.

49. A process for making an integrated circuit device, the process comprising the acts  
of:

providing a substrate; and

20 disposing a plurality of capacitive memory elements in a slanted orientation with respect to  
the substrate thereon.

50. A process for making an integrated circuit device, comprising the acts of:

providing a substrate; and  
disposing a plurality of capacitive memory elements in a non-orthogonal orientation with  
respect to the substrate thereon.

5           51.     An integrated circuit device produced by the process of:  
providing a substrate; and  
disposing a plurality of capacitive memory elements on the substrate so that an axis that  
extends longitudinally through one of the plurality of capacitive memory elements  
is not generally parallel with an edge of the substrate.

10           52.     An integrated circuit device produced by the process of:  
providing a substrate; and  
disposing a plurality of capacitive memory elements arranged in a first row and a second  
row so that an axis through one of the plurality of capacitive memory elements  
15           located in the first row does not form an axis of any capacitive memory element  
in the second row.

            53.     An integrated circuit device produced by the process of:  
providing a substrate; and  
20           disposing a plurality of capacitive memory elements in a slanted orientation with respect to  
the substrate thereon.

            54.     An integrated circuit device produced by the process of:

providing a substrate; and  
disposing a plurality of capacitive memory elements in a non-orthogonal orientation with  
respect to the substrate thereon.